ABSTRAK

Suaidatin Nadhifah

" PEMANFAATAN LIMBAH CAIR TEMPE SEBAGAI PUPUK ORGANIK CAIR DENGAN BIOAKTIVATOR KULIT KEDELAI "

xiv + 59 halaman + 14 tabel + 4 gambar + 5 Lampiran

Limbah cair industri tempe menimbulkan permasalahan pada lingkungan terutama pencemaran air, karena memiliki kandungan pencemar. Salah satu pengolahan limbah cair tempe dengan cara pemanfaatan limbah cair tempe menjadi pupuk organik cair. Pupuk organik cair merupakan larutan hasil dari pembusukan bahan-bahan organik. Tujuan penelitian adalah pemanfaatan limbah cair tempe menjadi pupuk organik cair dengan menggunakan bioaktivator kulit kedelai.

Jenis penelitian ini adalah pra-experimental designs dengan menggunakan rancangan desain penelitian Posttest only design. Objek penelitian yang digunakan limbah cair tempe pengulangan sebanyak 6 kali dengan pemberian variasi konsentrasi 10%, 15%, 20%, 30%. Proses pembuatan bioaktivator kulit kedelai dengan campuran effective mikroorganisme dan difermentasi selama 14 hari. Selama fermentasi terjadi perubahan pH dan suhu, hasil yang didapatkan pada hari terakhir pH (5 – 6) dan suhu sekitar (33°C – 34°C).

Pengukuran rasio C/N pada pupuk organik cair dilakukan sesudah perlakuan. Analisis data yang digunakan uji anova. Berdasarkan hasil penilitan nilai rata-rata kadar rasio C/N yang didapat disetiap pemberian variasi konsentrasi 10 % (C/N : 18.19 %), 15 % (C/N : 25.16 %), 20 % (C/N : 21.96 %), dan 30 % (C/N : 30.55 %) yang berarti tidak semua variasi konsentrasi menghasilkan nilai rasio C/N pupuk organik cair yang sesuai dengan baku mutu 15 % – 25 %.

Hasil nilai rasio C/N pada pupuk organik cair sesuai dengan baku mutu yaitu pada pemberian variasi konsentrasi 10 %, 15 %, 20% dan ada perbedaan hasil rasio C/N pupuk organik cair dari limbah cair tempe dengan bioaktivator kulit kedelai.

Kata kunci : Limbah Cair Tempe, Pupuk Organik Cair, dan Kulit Kedelai
Daftar Bacaan : 39 Jurnal + Buku

ABSTRACT

Suaidatin Nadhifah

"UTILIZATION OF TEMPE WASTE AS A LIQUID ORGANIC FERTILIZER WITH SOYBEAN SKIN BIOACTIVATORS"

xiv + 59 Pages + 14 Tables + 4 Images + 5 Attachments

Tempeh industrial liquid waste causes problems on the environment, especially water pollution, because it has a pollutant content. One of the methods of processing tempeh liquid waste is to use tempeh liquid waste as a liquid organic fertilizer. Liquid organic fertilizers are solutions resulting from the decomposition of organic matter. The purpose of this study was to utilize tempeh liquid waste as a liquid organic fertilizer using soybean skin bioactivator.

This type of research is pre experimental designs using Posttest research design only design. The object of the study used liquid waste tempeh repetition 6 times by giving a concentration variation of 13%, 20%, 27%, 40%. The process of making soybean skin bioactivators with an effective mixture of microorganisms and fermented for 14 days. During fermentation there is a change in pH and temperature, the results obtained on the last day of pH (5 – 6) and ambient temperature (34℃ – 33℃). Measurement of the C/N ratio in liquid organic fertilizers is carried out after treatment. Analysis of the data used in the ANOVA test.

Based on the results of the study, the average value of C/N ratio levels obtained in each administration was 13% (C/N : 18.19%), 20% (C/N : 25.16%), 27% (C/N : 21.96%), and 40% (C/N : 30.55%), which meant that not all concentration variations produced C/N ratio values of liquid organic fertilizers in accordance with quality standards 15% - 25%.

The results of the C/N ratio value on liquid organic fertilizers in accordance with quality standards, namely on giving a concentration variation of 13%, 20%, and 27%, and there is a difference in the C/N ratio of liquid organic fertilizers from tempeh liquid waste with soybean peel bioactivators.

Keywords : Tempe liquid waste, Liquid organic feltilizer, and Soyban skin
Reading List : 39 Journal + Books